

Section 8-6: Directed Graphs

By the end of this lesson, you should be able to answer:

- How do you use a picture, diagram, or model to represent a real-world problem?

Where you might see this in the real world:

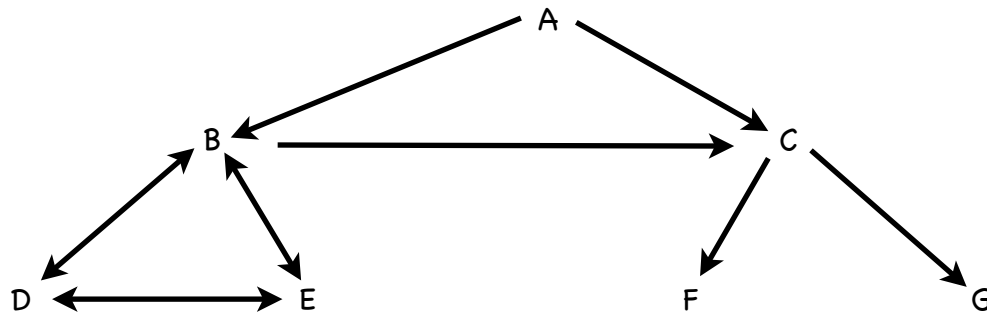
- Sports, navigation, business

Define the following term:

1. Directed graph

Often times it is helpful to draw a graph as a visual representation of a problem. A directed graph will help to show how you can move from one part of the problem to another.

Example 1: In the diagram, A – G represent students, and the arrows in the directed graph indicate that one person knows the other person's phone number.



How many phone numbers does B know?

If E wanted to call G, how many calls would E have to make to get G's number?

What is the total number of direct calls that can be made in this system?

Create a matrix to describe this problem. Let 0 = "they cannot call that person," and let 1 = "they can make that call."

Problem Set:

"Don't worry about the world coming to an end today. It's already tomorrow in Australia." - Charles M. Schulz